

ABSTRACT

5 An active pixel sensor array sampling system provides a differential voltage based upon a sampled video voltage and a sampled reference voltage for each pixel of the array. The system includes a reference and a video circuit for each column of pixels. The video circuits sample all of the column pixel video voltages of each row of pixels together in parallel. The column video voltages of each row of pixels are serially read. The reference amplifier samples and provides a reference voltage as each video voltage is read from the video circuits.